

Attorney Docket No.: DC-0187
Inventors: Cheung, Ambrose
Serial No.: 10/092,264
Filing Date: March 6, 2002
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This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A nucleic acid sequence which regulates expression of polypeptides involved in autolytic processes in bacteria.

Claim 2 (original): The nucleic acid sequence of claim 1 wherein the bacteria is *Staphylococcus aureus*.

Claim 3 (currently amended): The nucleic acid of claim 1 wherein the bacteria comprises *Staphylococcus*, *Sinorhizobium*, *Listeria*, *Clostridium*, ~~*Bacillus*~~ *Bacillus*, *Corynebacterium*, *Brucella*, *Pseudomonas*, ~~*Shewanella*~~ *Shewanella*, *Mesorhizobium*, *Caulobacter*, *Lactococcus*, *Mycobacterium*, *Burkholderia*, *Geobacter*, *Treponema*, *Vibrio*, *Escherichia*, *Enterococcus*, *Salmonella*, *Klebsiella*, *Bordetella*, *Actinobacillus*, *Streptomyces*, *Streptococcus*, or *Acinetobacter*.

Claim 4 (original): A nucleic acid sequence comprising SEQ ID NO:1 or SEQ ID NO:3.

Claim 5 (original): A polypeptide encoded by the nucleic acid sequence of claim 1.

Claim 6 (original): A polypeptide encoded by the nucleic acid sequence of SEQ. ID NO: 1 or SEQ ID NO:3.

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Claim 7 (original): A polypeptide sequence comprising SEQ ID NO: 2 or SEQ ID NO:4.

Claim 8 (original): A composition comprising a selected transposon and the nucleic acid sequence of claim 1.

Claim 9 (original): A vector comprising the nucleic acid sequence of claim 1.

Claim 10 (original): A host cell comprising the vector of claim 9.

Claim 11 (original): The polypeptide of claim 5 wherein the bacteria comprises *Staphylococcus aureus*.

Claim 12 (currently amended): The polypeptide of claim 5 wherein the bacteria comprises *Staphylococcus*, *Sinorhizobium*, *Listeria*, *Clostridium*, ~~*Bacillus*~~ *Bacillus*, *Corynebacterium*, *Brucella*, *Pseudomonas*, ~~*Shewanella*~~ *Shewanella*, *Mesorhizobium*, *Caulobacter*, *Lactococcus*, *Mycobacterium*, *Burkholderia*, *Geobacter*, *Treponema*, *Vibrio*, *Escherichia*, *Enterococcus*, *Salmonella*, *Klebsiella*, *Bordetella*, *Actinobacillus*, *Streptomyces*, *Streptococcus*, or *Acinetobacter*.

Claim 13 (original): A method for identifying agents which inhibit growth and infectivity of bacteria comprising identifying agents which inhibit expression of a nucleic acid sequence of claim 1 or activity of a polypeptide encoded thereby.

Claim 14 (original): The method of claim 13 wherein the bacteria is *Staphylococcus aureus*.

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Claim 15 (currently amended): The method of claim 13 wherein the bacteria comprises *Staphylococcus*, *Sinorhizobium*, *Listeria*, *Clostridium*, ~~*Bacillus*~~ *Bacillus*, *Corynebacterium*, *Brucella*, *Pseudomonas*, ~~*Shewanella*~~ *Shewanella*, *Mesorhizobium*, *Caulobacter*, *Lactococcus*, *Mycobacterium*, *Burkholderia*, *Geobacter*, *Treponema*, *Vibrio*, *Escherichia*, *Enterococcus*, *Salmonella*, *Klebsiella*, *Bordetella*, *Actinobacillus*, *Streptomyces*, *Streptococcus*, or *Acinetobacter*.

Claim 16 (original): A method of inhibiting growth and infectivity of bacteria comprising contacting the bacteria with an agent which inhibits the expression of a nucleic acid sequence of claim 1 or the activity of a polypeptide encoded thereby.

Claim 17 (original): The method of claim 16 wherein the bacteria is *Staphylococcus aureus*.

Claim 18 (currently amended): The method of claim 16 where the bacteria comprises *Staphylococcus*, *Sinorhizobium*, *Listeria*, *Clostridium*, ~~*Bacillus*~~ *Bacillus*, *Corynebacterium*, *Brucella*, *Pseudomonas*, ~~*Shewanella*~~ *Shewanella*, *Mesorhizobium*, *Caulobacter*, *Lactococcus*, *Mycobacterium*, *Burkholderia*, *Geobacter*, *Treponema*, *Vibrio*, *Escherichia*, *Enterococcus*, *Salmonella*, *Klebsiella*, *Bordetella*, *Actinobacillus*, *Streptomyces*, *Streptococcus*, or *Acinetobacter*.

Claim 19 (original): A pharmaceutical composition for use as an anti-bacterial agent comprising a pharmaceutically acceptable vehicle and either an agent which inhibits the expression of a

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nucleic acid sequence of claim 1 or an agent which inhibits the activity of a polypeptide encoded thereby.

Claim 20 (original): The pharmaceutical composition of claim 19 wherein the bacteria is *Staphylococcus aureus*.

Claim 21 (currently amended): The pharmaceutical composition of claim 19 wherein the bacteria comprises *Staphylococcus*, *Sinorhizobium*, *Listeria*, *Clostridium*, ~~*Bacillus*~~ *Bacillus*, *Corynebacterium*, *Brucella*, *Pseudomonas*, ~~*Shewanella*~~ *Shewanella*, *Mesorhizobium*, *Caulobacter*, *Lactococcus*, *Mycobacterium*, *Burkholderia*, *Geobacter*, *Treponema*, *Vibrio*, *Escherichia*, *Enterococcus*, *Salmonella*, *Klebsiella*, *Bordetella*, *Actinobacillus*, *Streptomyces*, *Streptococcus*, or *Acinetobacter*.

Claim 22 (original): A kit for identifying the presence of RAT polypeptides or comprising a means for analyzing a biological sample for the presence of a RAT polypeptide, whereby detection of a RAT polypeptide in the sample is indicative of the susceptibility to treatment for a bacterial infection.

Claim 23 (original): A kit for identifying the presence of the RAT gene comprising a means for analyzing a biological sample for the presence of the RAT gene.

Claim 24 (original): A kit for identifying the presence of RAT mutant polypeptides or comprising a means for analyzing a biological sample for the presence of a RAT mutant polypeptide, wherein detection of a RAT mutant polypeptide in the sample is indicative of the susceptibility to treatment for a bacterial infection.

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Claim 25 (original): A kit for identifying the presence of the RAT mutant gene comprising a means for analyzing a biological sample for the presence of the RAT mutant gene.